

**METHODS FOR ISOLATING AND CHARACTERIZING ENDOGENOUS  
mRNA-PROTEIN (mRNP) COMPLEXES**

**ABSTRACT**

Cellular mRNA-protein (mRNP) complexes are partitioned *in vivo* by contacting a biological sample with at least one ligand that specifically binds at least one component of a mRNP complex. Suitable biological samples comprise at least 5 one mRNA-protein (mRNP) complex and include cell cultures, cell extracts, and whole tissue, including tumor tissue. Ligands include antibodies that specifically bind RNA-binding or RNA-associated proteins present in the mRNP complex. The mRNP complex is separated by binding the ligand with a binding molecule specific for the ligand, where the binding molecule is attached to a solid support. The mRNP 10 complex is collected by removing the mRNP complex from the solid support. After collecting the mRNP complex, the mRNA bound within the complex may be characterized and identified. Subsets of the total mRNA population of a cell may accordingly be characterized, and a gene expression profile of the cell obtained.